

PATENT COOPERATION TREATY

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From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2005/009816

International filing date (day/month/year)
23.05.2005

Priority date (day/month/year)
22.05.2004

International Patent Classification (IPC) or both national classification and IPC
G01R31/319, G01R31/3183, G06F11/26, G06F17/50

Applicant
ADVANTEST CORPORATION

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2005/009816

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2005/009816

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:
- ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☒ not paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with
 - ☒ not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
 - ☒ the parts relating to claims Nos. 1-26

Box No. V Reasoned statement under Rule 43b/s.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-26
	No: Claims	
Inventive step (IS)	Yes: Claims	4-7,9-13,17-20,22-26
	No: Claims	1-3,8,14-16,21
Industrial applicability (IA)	Yes: Claims	1-26
	No: Claims	

2. Citations and explanations

see separate sheet

1. Citations:

- D1: PEREZ S M ET AL: "Open architecture test system: the new frontier" 28TH. IEEE/CPMT/SEMI INTERNATIONAL ELECTRONICS MANUFACTURING TECHNOLOGY SYMPOSIUM. (IEMT). SAN JOSE, CA, JULY 16 - 18, 2003, XP010655419 ISBN: 0-7803-7933-0
- D2: US 2003/217343 A1 (RAJSUMAN ROCHIT ET AL) 20 November 2003

Re Item IV

2. **Rule 13 PCT (Non-Unity)**

- 2.1 This Authority considers that there are 2 inventions covered by the claims indicated as follows:

I: Claims 1-26

directed to a modular test system with site controller, standard software interface and framework for managing pattern object files.

Special technical features: claims 4-7, 9-13, 17-20, 22-26

II: Claims 27-30

directed to a pattern compiler generating a pattern object metafile with header and common section.

Special technical features: e.g. claim 29.

- 2.2 The common technical features of both groups are "pattern compiler generating a pattern object metafile" and "object file management framework". However, these features, as far as they are technical, are not novel and inventive (cf. e.g. D2 Fig. 4, paragraph [0042]-[0049]) and cannot be considered as common inventive concept.

- 2.3 In conclusion, the groups of claims are not linked by common or corresponding special technical features and define 2 different inventions not linked by a single general inventive concept. The application, hence does not meet the requirements of

unity of invention as defined in Rules 13.1 and 13.2 PCT.

3. Article 33(3) PCT (inventive step)

3.1 INDEPENDENT CLAIM 1:

- a) D1, which is considered to represent the closest prior art, discloses a method for managing a pattern object file (cf. Fig. 1 a compiled module specific pattern) in a modular test system, comprising: providing a modular test system, wherein the modular test system comprises a system controller (cf. Fig. 1a: Multi-Site Control) for controlling at least one site controller, and wherein the at least one site controller controls at least one test module (cf. Fig. 1 b) and its corresponding device under test (DUT); receiving a pattern source file (a pattern compiler always compiles a pattern source file to a pattern object file, cf. D2, Fig. 4); creating a pattern object metafile based on the pattern source file and testing the DUT through the test module using the pattern object metafile; cf D1, abstract, Figs. 1a and 1b, page 212 "*OPENSTAR Overview*".
- b) D1 does not explicitly disclose "creating a (pattern) object file management framework for establishing a standard interface between vendor-supplied pattern compilers and the modular test system".
- c) However, D1 discloses
 - i) a "GUI test programming layer ... [which] provides a generalized user's interface Integration of software modules is done via clearly defined application programming interfaces" and
 - ii) "a single, proven, unified testing solution framework for IC testing"; cf. D1, page 212 "*OPENSTAR Overview*".
- d) Test pattern files are the basic components of test programming. Therefore, the skilled person is automatically pointed to applying the aforementioned concept of "establishing a standard interface" and "creating a framework for IC testing" to pattern object files.
- e) Comment: In addition, the expressions "object file management framework" and

"standard interface" are not specified by characterizing technical features. A computer program (file) and a computer program framework as well as a computer program interface as such are non-technical. Non-technical features are not taken into account for inventive step.

3.2 INDEPENDENT CLAIM 14:

This claim contains the apparatus features corresponding to method claim 1: cf., mutatis mutandis, paragraph 3.1, above.

- 3.3 Claims 2, 15: Standardization implies classification of corresponding features.
- 3.4 Claims 3, 16: Adapting a pattern from one module interface to another comprises transfer of module-specific data.
- 3.5 Claims 8, 21: are obvious in view of D2, Figs. 4&5, paragraph [0042]-[0049]

Consequently, the subject-matter of the claims 1-3, 8, 14-16 and 21 is not inventive.

5. Re Item VII and VIII

- 5.1 The present set of claims lack reference signs and is not in the two-part form (**Rules 6.2 (b) and 6.3 (b) PCT**).
- 5.2 The relevant prior art documents D1 and D2 are not cited and discussed in the description (**Rule 5.1 (ii) PCT**).
- 5.3 Software related features as such are non-technical and are therefore not taken into account for inventive step. These features should therefore be specified by characterizing technical features/effects (cf T641/00, T1173/97, T1194/97, T931/95, T258/03, G1/93).